

AMENDMENTS TO THE CLAIMS

1. (Previously presented) A method for protecting a plant against dehydration, said method comprising the steps of:
  - (a) providing a transgenic plant cell that expresses substantially pure DNA encoding a calcium-dependent protein kinase (CDPK) polypeptide that includes a protein kinase (PK) domain having a sequence that is at least 90% identical to SEQ ID NO: 2; and
  - (b) growing a transgenic plant from said plant cell, wherein said DNA is expressed in said transgenic plant, and wherein said transgenic plant has increased tolerance to dehydration compared to a corresponding untransformed plant.

2- 5. (Cancelled)

6. (Previously presented) The method of claim 1, wherein the expression of said polypeptide activates the expression of a stress-protective protein-encoding gene.

7. (Previously presented) The method of claim 1, wherein said DNA is constitutively expressed in said transgenic plant.

8 – 23. (Cancelled)

24. (Previously presented) A plant comprising substantially pure DNA encoding a polypeptide that includes a PK domain having an amino acid sequence that is at least 90% identical to SEQ ID NO: 2, wherein said polypeptide increases drought tolerance in a plant expressing said polypeptide.

25. (Currently amended) A seed comprising substantially pure DNA encoding a polypeptide that includes a PK domain having an amino acid sequence that is at least 90% identical to SEQ ID NO:2, wherein said polypeptide increases drought tolerance in a plant expressing said polypeptide. from a transgenic plant of claim 24.

26. (Currently amended) A cell comprising substantially pure DNA encoding a polypeptide that includes a PK domain having an amino acid sequence that is at least 90% identical to SEQ ID NO:2, wherein said polypeptide increases drought tolerance in a plant expressing said polypeptide. from a transgenic plant of claim 24.

27 - 35 (Cancelled)

36. (Previously presented) Substantially pure DNA consisting of a sequence that encodes a PK domain having an amino acid sequence that is at least 90% identical to SEQ

ID NO:2.

37. (Previously presented) The DNA of claim 36, wherein said DNA encodes a polypeptide that confers tolerance to dehydration.

38. (Previously presented) The DNA of claim 36, wherein said DNA encodes a polypeptide that confers tolerance to salinity.

39. (Previously presented) The DNA of claim 36, wherein said DNA encodes a polypeptide that confers tolerance to a temperature stress.

40. (Currently amended) The DNA of claim 36, wherein said DNA comprises a nucleic acid sequence substantially identical to the nucleic acid sequence of SEQ ID NO: 1, shown in Fig. 5 (SEQ ID NO: 1).

41. (Original) The DNA of claim 36, wherein said DNA is operably linked to an expression control region.

42. (Previously presented) The DNA of claim 41, wherein said expression control region comprises a promoter.

43. (Original) The DNA of claim 42, wherein said promoter is a constitutive promoter.

44. (Original) The DNA of claim 43, wherein said promoter is an inducible promoter.

45. (Original) A cell which includes the DNA of claim 36.

46. (Original) The cell of claim 45, wherein said cell is a plant cell.

47- 48 (Cancelled)

49. (Original) The method of claim 1, wherein said calcium-dependent protein kinase (CDPK) polypeptide is ATCDPK1 or ATCDPK1a.

50. (Previously presented) The plant of claim 24, wherein said calcium-dependent protein kinase (CDPK) polypeptide is ATCDPK1 or ATCDPK1a.